CHAPTER IV
ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

A. AESTHETICS

INTRODUCTION

As more fully described in the 1987 LRDP EIR, as amended, potential impacts on visual quality could result from continued University operation of LBNL, including continued facility development as contemplated in the 1987 LRDP.

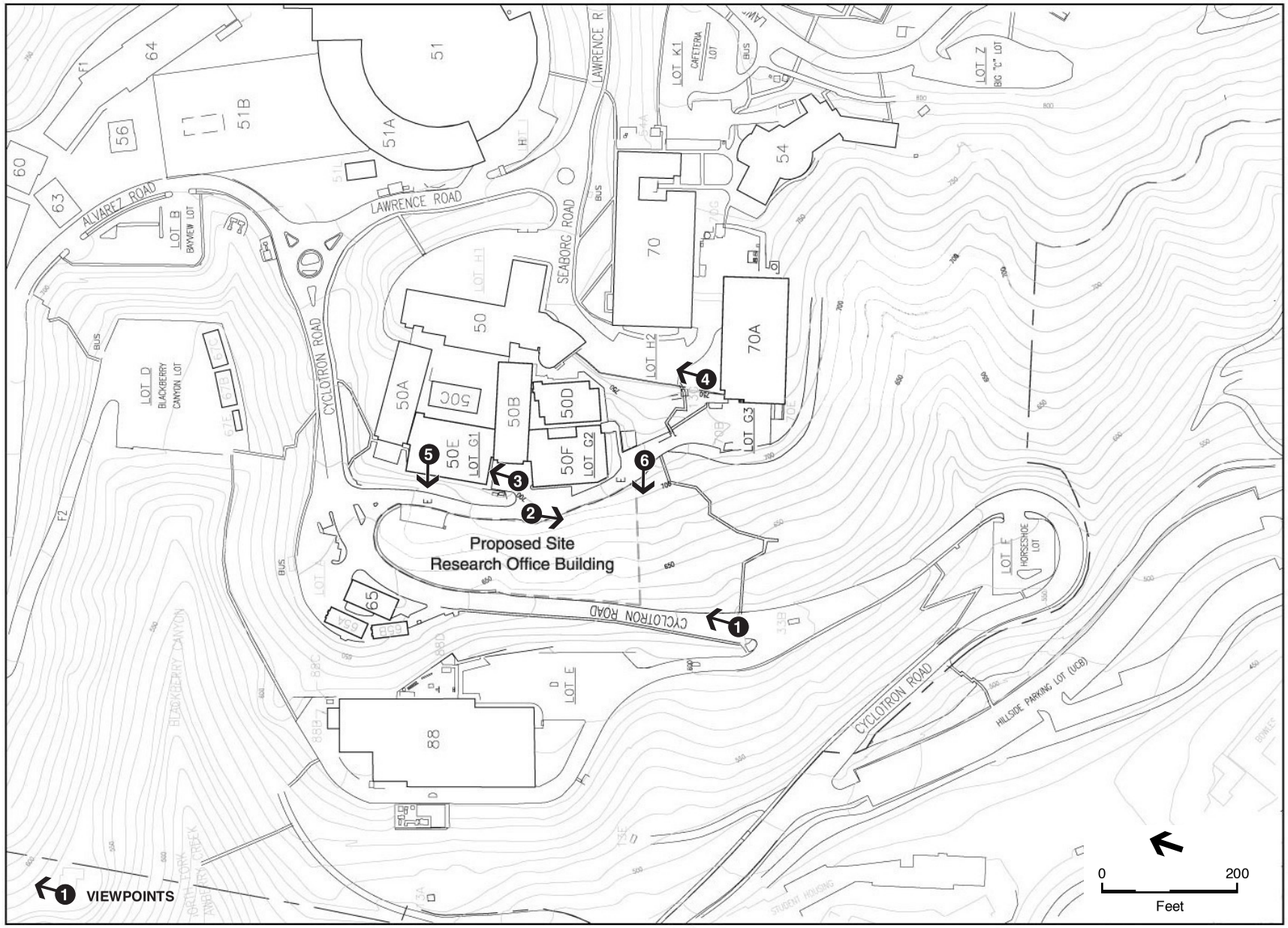
This section discusses existing visual conditions at the proposed Building 49 site and analyzes the potential for the project to affect those conditions, focusing on the visual character of the site and views from surrounding public areas. Figure IV.A-1 identifies viewpoint locations for the proposed project. The physical characteristics of the site and surrounding areas are discussed briefly. For a detailed physical description of the land uses mentioned below, refer to Section IV.H, Land Use and Planning.

SETTING

VISUAL CHARACTER

Vicinity of Site

LBNL is located on 200 acres in the eastern hills of Berkeley and Oakland, and is surrounded by open space, institutional uses, and residential and neighborhood commercial areas. The project site is located entirely within the City of Berkeley, between Blackberry and Strawberry Canyons. West and southwest of the site is the University of California, Berkeley campus, characterized by a variety of buildings, open space, student parking areas, and mature landscaping. Specifically, the project site is located uphill and across Cyclotron Road from student housing, the Greek Theater, and Stern and Bowles Halls. The Stadium and other University buildings are located further southwest. Also to the west and northwest of the site are residential neighborhoods and a small commercial area located in the City of Berkeley. The residential neighborhoods are characteristically a mix of single- and multiple-family homes, some small retail uses, and a variety of local, landscaped roadways. Some of the homes closest to the project site are tucked into the lower reaches of the hillside, while others are situated atop the higher ridges, and therefore have an unimpeded panoramic view of the site and its environs. To the south and southeast of the site are Tilden and Claremont Canyon Regional Parks. These large open space areas are heavily vegetated with eucalyptus, oak, and other herbaceous species, and include numerous paved and unpaved recreational trails, open field areas, and a variety of public amenities.



SOURCE: Lawrence Berkeley National Laboratory (2003)

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Figure IV.A-1
Key to Viewpoint Locations

Project Site

The proposed Building 49 site is located on an undeveloped slope, east of Cyclotron Road, and immediately northeast of LBNL's Blackberry Canyon entrance. To the north of the site is the main LBNL shuttle bus stop, and to the south is a Building 50 wooden stairway and undeveloped hillside. The site is also adjacent to the Building 50 complex to the east, and Cyclotron Road, the Building 65 complex, and Building 88 to the west. The approximately 1.08-acre site contains some 18 mature eucalyptus trees, about 8 coast live oak trees, and mixed grassland areas. The site steeply slopes downward from east to west (see Figure IV.A-2).

VIEWS OF THE SITE

The proposed project would be located in an area intermittently visible from surrounding short- and long-range viewpoints. The site is near the northeastern[6] perimeter of the UC Berkeley campus in a scenic area that encompasses the Oakland and Berkeley Hills, and Strawberry and Blackberry Canyons. The hills provide a semi-natural, vegetated open space backdrop to the project site. Most of the western slopes of these hills are wooded with native canyon stands of oak and California bay or with introduced plantations of eucalyptus or conifers. It is these terrain features, most notably the slopes, that make up Strawberry Canyon, while the surrounding stands of tall trees that provide cover to the proposed project from most potential viewpoints in the surrounding region.

Although adjacent to existing development, the proposed project site is currently undeveloped and includes mature trees and some open, sloping grassland areas (shown in Figure IV.A-2). The project site is located in a portion of West Strawberry Canyon that is visible to persons along a short segment of East Road, on the LBNL grounds adjacent to the eastern perimeter of the site. The site also is visible from vantage points along Cyclotron Road at the site's western perimeter; latter viewpoints are just outside the LBNL fence line (see, for example, Viewpoint 1 in Figure IV.A-2; while just inside the Lab gate, this viewpoint is representative of views from Cyclotron Road below the project site). While these latter viewpoints are publicly accessible, the number of observers of these views is somewhat limited by the viewpoint locations just a few hundred feet from LBNL's main Blackberry Canyon gate. Thus, it is likely that the great majority of observers from such near-field viewpoints are lab employees or visitors.

Farther from the LBNL grounds, the site is also visible in medium-range views from nearby elevated off-Laboratory locations, including residential neighborhoods to the north and northwest in Berkeley, such as from Parnassus Road and Hilgard Avenue, and Le Conte Avenue and Ridge Road in the nearby Seminary Hill neighborhood. Nearby and adjacent buildings include several office and research buildings associated with LBNL's Central Research and Administration Area (Buildings 50, 50A-F, 70, 70A; see Figure IV.A-3) as well as several office trailers (Buildings 65, 65A, 65B). Many buildings, walkways, and landscaped areas in the Central Research and Administration Planning Area offer dramatic long-range views of the adjacent communities,

6 This analysis incorporates true compass directions.

FIGURE IV.A-2

(BUILDING 49 SITE)

COLOR FIGURE

Viewpoint 1: Building 49 Site looking northeast from Cyclotron Road at the Blackberry Gate Entrance.

Viewpoint 2: Southern portion of Building 49 Site looking south from East Road.

SOURCE: Environmental Science Associates (2003)

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Figure IV.A-2
Existing Site and Vicinity Conditions

FIGURE IV.A-3

(BUILDINGS 50, 70, 65)

COLOR FIGURE

Viewpoint 3: Buildings 50A, 50C, and 50E looking northeast from East Road.

Viewpoint 4: Building 50 and Building 70 looking north from Building 70A stairwell.

SOURCE: Environmental Science Associates (2003)

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Figure IV.A-3
Existing Site and Vicinity Conditions

San Francisco, and the Bay. Existing vantage points on the LBNL grounds within one quarter-mile of the proposed project site include locations along north-south axis streets such as Cyclotron Road, at locations with higher elevations to the east of the site along East Road, and at traffic turn-outs. Views afforded from these vantage points include long-range views westwards towards the Bay, including historic landmarks such as the Golden Gate Bridge and Alcatraz Island, as well as the urban landscape of the adjacent Berkeley and UC campus development (see Figure IV.A-4).

LIGHT AND GLARE

The existing sources of light and glare around the project site is generally limited to the interior and exterior lights associated with development at LBNL, including all buildings, parking lots, and access roads. The proposed project would be located in a hillside area of LBNL that includes several other buildings that are existing sources of light and glare, including the adjacent Building 50, 65, and 70 complexes. All onsite buildings and parking areas currently are equipped with outdoor, downward-directed light fixtures for nighttime lighting and security. In addition, the cars and trucks traveling to and from the site represent source of glare. The project site is located near roadways such as Cyclotron Road and East Road, where street lighting projects light and glare during evening hours.

REGULATORY ENVIRONMENT

1987 LBNL LRDP

The perimeter of the Laboratory, covering the area between the LBNL fence line and the central development core, is designated as open space that preserves the natural beauty of the area and acts as a buffer between LBNL and the UC Campus, the nearby residential areas, the Lawrence Hall of Science, and the UC Botanical Garden. These natural buffer areas are managed with the following objectives:

- Maintain esthetic and environmental values;
- Stabilize slopes and manage rainwater runoff;
- Reduce fire hazards; and
- Visually screen facilities, roadways and parking areas.

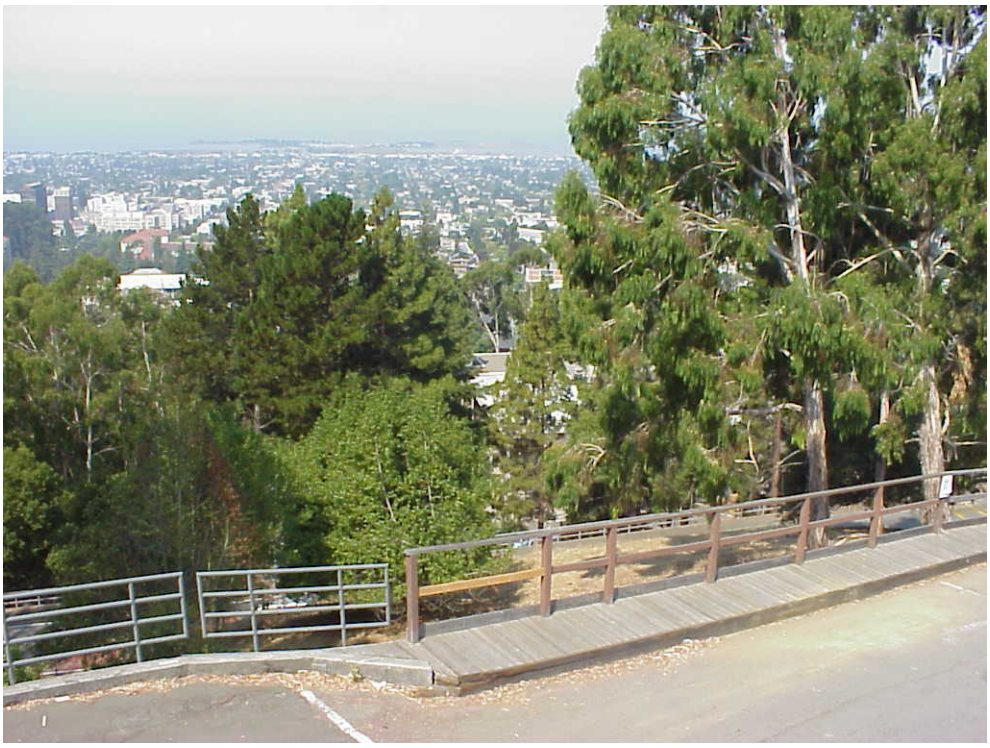
Landscape planting areas are established throughout the Laboratory grounds to sustain or augment the shrub, grassland, and forest areas of the Lab. Major landscaping goals are to:

- Complement the hillside setting;
- Unify the site visually;
- Relate the site to adjacent vegetation of the Berkeley Hills;
- Prevent erosion;
- Provide amenities to users of the site; and,
- Provide a buffer between functional areas, building and adjacent properties.

FIGURE IV.A-4

(WESTWARD PANORAMIC VIEWS)

COLOR FIGURE



Viewpoint 5: View looking west from Building 50E.

Viewpoint 6: View looking west from East Road.

SOURCE: Environmental Science Associates (2003)

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Figure IV.A-4
Existing Site and Vicinity Conditions

The 1987 LRDP also includes Design Guidelines that were developed to achieve specific facilities planning requirements while respecting site constraints and providing coherence among building elements and the landscape. The guidelines provide a general framework for facilities design and are intended to be augmented by more detailed landscape plans that identify criteria for suitable building sites and that further clarify landscape planting form. The guidelines generally address: open space and outlooks; landscaping and visual enhancement; topography and grading; utilities corridors; building mass and orientation; building exteriors; building flexibility; energy and operational efficiency; circulation and parking; and provide a guideline review process for future development onsite.

IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

The existing visual character of the site and its surroundings is determined by the attributes of specific features and of the patterns the features have assumed as a result of natural and/or cultural processes. Evaluation of potential project impacts on the visual character of the site and surroundings requires analysis of the individual elements of the project and how introduction of those elements (separately or collectively) would affect the character of the proposed site and views of the site from offsite locations.

An impact of an LBNL project on visual quality would be considered significant if it would exceed the following Standards of Significance, in accordance with Appendix G of the state CEQA *Guidelines* and the UC CEQA Handbook:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings;
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area; and,
- Exceed an applicable LRDP or Program EIR standard of significance.

The following relevant impacts to visual quality and aesthetics have been anticipated and analyzed pursuant to CEQA, as part of the programmatic 1987 LRDP EIR, as amended, from which this analysis is tiered:

Impact III-F-1:	Continued implementation of the 1987 LRDP will result in a change to the visual quality of LBNL and the surrounding environs. (Potentially significant without mitigation)

Impact III-F-2:	Some LBNL projects may be visible because trees, which would have screened the building, have been removed and replacement landscaping will take some time to reach full height.
Impact III-D-2:	Continued University operation of LBNL, including continued implementation of the LRDP, will result in the loss of some vegetation, including potential loss of mature trees and areas with some habitat for non-critical species.
Cumulative Impacts:	No significant cumulative impacts are expected.

As a result of anticipated impacts to visual quality, the following mitigation measures, adopted as part of the 1987 LRDP EIR, as amended, are already required for the proposed project, and are therefore incorporated as part of the proposed project's description:

Mitigation Measure III-F-1a:	Buildings will occupy as limited a footprint as feasible. They will incorporate features that enhance flexibility and future versatility.
Mitigation Measure III-F-1b:	Buildings will be planned to blend with their surroundings and be appropriately landscaped. Planned objectives will be for new buildings to retain and enhance long distance view corridors and not to compromise views from existing homes. New buildings will generally be of low rise construction.
Mitigation Measure III-F-2:	Any new facilities will not use reflective exterior wall materials or reflective glass, to mitigate the potential impacts of light and glare.
Mitigation Measure III-D-2a:	Revegetation of disturbed areas, including slope stabilization sites, using native shrubs, trees, and grasses will be included as part of all new projects.

EXCAVATION, GRADING, AND CONSTRUCTION IMPACTS

Impact A.1: Construction of the proposed project, including all earthmoving activities such as excavation and grading, would result in a change to the visual quality of the site and its surroundings. (Less than Significant)

Excavation, grading, and construction activities would create a short-term adverse effect on the visual quality of the project site and its surroundings. These activities would occur during an approximately 18-month time period and would result in the removal of up to about 26,000 cubic yards of soil from the Building 49 site and development of a new six-story building.

The aesthetic environment during the approximately three-month period of excavation would consist of elements typical to a construction site such as bulldozers, trucks, loaders, and excavators,

as well as disturbed hillside land and surfaces. Severe angular cuts and/or filling, which results in an unnatural or engineered appearance, would be avoided where feasible. In addition, graded slopes would be feathered and rounded where feasible to provide a natural transition between the graded site and adjacent ungraded areas. Furthermore, grading would be minimized though the use of retaining walls where compatible with proper design.

As noted in the Project Description, most trees on the project site would be removed, although a group of coast live oak at the northern end of the site would be retained. Trees proposed for removal are primarily eucalyptus, and are generally located in isolated locations. Much larger groves of mature trees in the general vicinity would remain untouched by the proposed project, including a large screening grove of Canary Island pines to the west of the Building 49 site, across Cyclotron Road, as well as the ravine to the south of the site, above Cyclotron Road, which includes numerous oak, bay, acacia, and eucalyptus trees.

Replacement trees would be planted or transplanted in various locations in and surrounding the project site, and positioned to maximize screening benefits, at locations such as along the more visible western edge of the site. All trees placed by the proposed project would be irrigated as necessary. The 1987 LRDP EIR, as amended, anticipates the loss of mature trees as the result of Lab development (Impact III-D-2) and stipulates that revegetation of the sort described here be included as part of all new projects (Mitigation Measure III-D-2a). Because the principal screening values and visual character of project-removed trees would be replaced, tree removal required for construction of this project would not cause a significant impact.

As the new building was constructed, the aesthetic environment of the project site would shift from one dominated by excavation and grading to one focused on construction activity, including erection of the structural framing and, ultimately, exterior finishes. During this time, which would make up the bulk of the 18-month development schedule, activity at the site would be obviously noticeable from close-in viewpoints. In general, newly built structures tend to stand out in their environment until materials begin to weather and landscaping takes hold.

Mitigation: None required.

OPERATIONS IMPACTS

Impact A.2: The project would result in a change to the scenic vistas of which the proposed project site is a part. (Less than Significant)

The proposed project would alter views of the currently undeveloped site from nearby areas including the adjacent UC Berkeley campus and Berkeley residential neighborhoods to the north and northwest. The proposed Building 49 would be built into the existing hillside terrain. The building would be designed to complement the predominant architectural style of LBNL, which includes modern functional finishes to moderately large commercial and institutional structures. It is not anticipated that the visible change in landscape from offsite locations would be readily

discernible from the identified viewpoints. Rather, the project, where visible, would appear as an incremental increase in the level of development on the LBNL grounds. For example, the upper stories of Building 49 would likely be intermittently visible from off-site viewpoints that lie to the west in the City of Berkeley, particularly along a few blocks of Le Conte Avenue and Ridge Roads in the Seminary Hill Neighborhood. However, from these viewpoints, the upper floors of the project would be visible against the much more prominent backdrop of the relatively massive Building 50 complex, which would appear immediately behind and above the project. Furthermore, the project site would be revegetated according to LRDP requirements, with landscaping positioned to maximize screening value. Thus, to the extent that the project could be visible from scenic view corridors in Berkeley, such as Cedar Street and Dwight Way, it would be a relatively minor visual element in the distant background.

Although many of the trees on the project site would be removed, the West Strawberry Canyon perimeter "buffer zone" (consisting of existing and proposed plantings of tall, indigenous, and non-native tree stands) would be maintained to act as a visual buffer between LBNL development and adjacent uses. This would be in keeping with the visual buffer and landscaping directives of the 1987 LRDP. Furthermore, landscape planting areas within and adjacent to the site would be established to "unify the site visually, to relate the site to adjacent vegetation of the Berkeley Hills, and to provide compatibility between buildings and adjacent properties" (1987 LRDP, p. 16). To preserve the existing character of the site, areas that would be disturbed by construction activities would be replanted in accordance with LBNL's Integrated Landscape Management Program. Project plant stock would be drought-tolerant and native to the East Bay Area environment. As the proposed project would incorporate the above-mentioned landscaping details into the design of the project, and would be located adjacent to existing development of comparable height and massing, the proposed development would not have a substantial adverse effect on a scenic vista.

Mitigation: None required.

Impact A.3: The project would alter the existing visual character of the site and its surroundings. (Less than Significant)

The proposed project would result in a visual change because it would entail the construction of a six-story office building (including a rooftop utilities penthouse) on an undeveloped hillside site near LBNL's Blackberry Entrance, east of Cyclotron Road. Building 49 would consist of stacked and identical floor space on the second through the fifth floors, and smaller recessed floorplates on the entry level and sixth story.

The project would be located in an area that is developed with existing office, administration, and science research buildings and associated uses of similar massing and height, and would incorporate landscaping on the project site for screening purposes. Natural landscaping details would include fire-resistant ground cover for erosion control, as well as decorative plant materials that blend with the surrounding wooded hillside. Furthermore, Building 49 would implement

existing design guidelines, as described in the 1987 LRDP, and would undergo design review by LBNL architects and engineers prior to construction to ensure project conformance with the guidelines. The proposed building would incorporate architectural details that are similar to or that complement adjacent development, the building exterior materials would incorporate a non-reflective material to minimize glare and exterior maintenance, and the roof would consist of a Class I approved system with heat-reflective coating to reduce solar gain. The project through incorporation of site-sensitive landscaping and design principles into project design would be generally consistent with the 1987 LRDP. As such, the project would not substantially degrade the existing visual quality of the site and surroundings beyond what was anticipated and analyzed in the 1987 LRDP EIR, as amended.

Although the project would remove a number of trees from the site, replacement trees would be planted. Irrigation and landscaping are expected to be consistent with the State Model Water Efficient Landscape Ordinance AB 325. The 1987 LRDP EIR, as amended, accounts for the temporary impact of removing mature trees and replacing them with younger, smaller trees in Impact III-F-2. Because the principal screening values and visual character of project-removed trees would be replaced, tree removal for this project would not cause a significant impact. Furthermore, while the 1987 LRDP EIR, as amended, anticipates the loss of mature trees as the result of new development (Impact III-D-2), it stipulates that revegetation of the sort described must be included as part of all new projects (Mitigation Measure III-D-2a) to ensure that such impacts are less than significant.

Mitigation: None required.

Impact A.4: The project would increase the amount of light and glare emitted from the project site. (Less than Significant)

The proposed project would be located in a hillside area of LBNL that includes several other buildings that represent existing potential sources of light and glare, including the adjacent Building 50, 65, and 70 complexes. The project site is located among local roadways including Cyclotron Road and East Road, where street lighting projects light and glare during evening hours. The project includes 10 open-surface parking spaces at the Building 49 site, and anticipates outdoor lighting near the parking spaces for operational purposes. The proposed project would include some fixed exterior lighting, particularly at building entrances, to promote worker safety. Fixtures would be downward directed and would employ anti-spill features to minimize the effect of lighting on offsite locations. The project would include a detailed exterior lighting plan that would be reviewed by LBNL's architects and engineers prior to construction. Furthermore, in keeping with 1987 LRDP EIR, as amended, Mitigation Measure III-F-2, the project would utilize non-reflective exterior materials, would adhere to a foot-candle maximum level at night, and would install night caps on all outdoor fixtures to minimize potential light and glare spillover impacts. As these actions would ensure conformance with the current LRDP design guidelines as well as compatibility with surrounding land uses, the proposed project would not result in a significant new source of light or glare.

Mitigation: None required.

CUMULATIVE IMPACTS

Impact A.5: The project, when combined with other proposed onsite and nearby development, such as the recently approved Molecular Foundry, would result in a visual change to the area. (Less than Significant)

Implementation of the proposed project would result in a visual change to the LBNL and surrounding hillside environment. The approved Molecular Foundry building would have a similar project-specific result. However, both projects would be visible from limited and mutually exclusive vantage points, and neither would take place in an area that is not currently surrounded by development. In addition, landscaping requirements would provide screening value to the new development. According to the LBNL LRDP and 1987 LRDP EIR, as amended, overall development at LBNL would not adversely impact the visual quality of the area. None of the other projects identified at LBNL, the City of Berkeley, or on the UC Berkeley campus would noticeably add to a visual quality cumulative impact with the proposed project.

Mitigation: None required.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

As noted in the discussion above, under the 1987 LRDP EIR, as amended, the proposed project would not exceed the Standards of Significance established for environmental effects related to aesthetics.

Potentially significant impacts not mitigated by the 1987 LRDP EIR, as amended, mitigation measures: None. The proposed project would incorporate 1987 LRDP EIR, as amended, Mitigation Measures III-F-1a, III-F-1b, III-F-2, and III-D-2a. As a result, no significant aesthetic or visual resources impacts would result from the proposed project.

Building 49 Project-Specific Mitigation Measures: None required.